

# FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For: Carroll County BOE

> Prepared By: Jim Strong MFC

Time Period Covered by This Plan: 2012 - 2021

Date Plan Prepared: 2012-02-15

Plan Type: Stewardship / Stewardship

This plan was developed in accordance with the rules of the Stewardship program.

Property Name: S16-T17N-R3E

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# LANDOWNER INFORMATION

Name: Carroll County BOE

Mailing Address: P O Box 256

City, State, Zip: Carrollton, MS 38917 Country: United States of America

Contact Numbers: Home Number:

Office Number: 662-237-9276

Fax Number:

E-mail Address:

Social Security Number (optional):

# FORESTER INFORMATION

Name: Jim Strong, Service Forester

Forester Number: 00898 Organization: MFC

Street Address: P O Box 95

City, State, Zip: Carrollton, MS 38917

Contact Numbers: Office Number: 662-237-6732

Fax Number:

E-mail Address: jstrong@mfc.state.ms.us

# PROPERTY LOCATION

County: Carroll Total Acres: 674 Latitude: -89.99 Longitude: 33.34

Section: 16 Township: 17N Range: 3E

### **DISCLAIMER**

This information was derived from a small sampling of the forest resources. It reflects a statistical estimation that is only intended to be accurate enough for the purposes of making decisions for the short-term management of these resources. These estimations are temporally static. Events and circumstances may occur within the survey area that will physically alter the forest resources and therefore will not be reflected in this plan.

### INTRODUCTION

This Forest Stewardship Management Plan will serve as a guide for accomplishing the goals and objectives for your property. In addition to addressing your specific goals and objectives, this plan includes recommendations for maintaining soil and water quality and protecting your forest from insects, disease, and wildfire. Recommendations are based on observation and assessment of the site.

# **OBJECTIVES**

#### Timber Production

The goal is to produce high quality sawtimber. This will be accomplished through reforestation and timber stand improvement practices such as herbicide applications, prescribed burning, thinning at specified intervals, and other silvicultural practices. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

# Wildlife Management - General

The goal is to provide a diversity of habitats suitable for a variety of game and non-game wildlife species. Habitat management will focus on developing a variety of food, cover, water, and space. This will be accomplished by establishing and maintaining access roads and firelanes, providing openings within the forest, and the management of trees located within the Streamside Management Zone

### PROPERTY DESCRIPTION

# General Property Information

This section of 682 acres is located near Black Hawk Mississippi in the Southern part of Carroll County. All of the section is classifed as Forest Land and is in timber production except a 5 acre Farm Residential Lease. County Road # 218 runs north and south through this section.

#### Water Resources

The drainages of this section are in the Abiaca Watershed. Abiaca Creek is a tributary of the Yazoo River. The objective is to protect, preserve and enhance all water sources and drainages on or transecting the property. Mississippi Best Management Practices will be implemented during all aspects of the management of this property to minimize the impact on water resources.

#### Timber Production

The goal is to maximize the production of high quality timber. This will be accomplished through the application of timely thinning and other silvicultural practices designed to enhance timber quality and growth. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

# Threatened and Endangered Species

No threatened and endangered species were identified during the reconnaissance and evaluation of this property.

If any threatened and /or endangered species are discovered, immediate management procedures will be applied to protect these sensitive natural resources for future generations.

#### *Interaction with Surrounding Property*

Prescribed practices should be carried out in a manner that will minimize adverse impacts on surrounding properties. Consideration should be given to potential air, water, visual, and other impacts. In addition, practices carried out should have positive effects on the surrounding community such as improved wildlife habitat and soil stabilization.

#### Soils General

Soils were evaluated on the property to determine the suitability of the site for the proposed activities. Forest practices were planned so as to minimize erosion or other adverse effects on the soil. The following soils are identified for this property: Gullied Land Complex, Lorring Silt Loam and Memphis Silt Loam. For a complete description of these soils, please see the Soil Type Section of this plan.

# Archeological or Cultural Resources

No Archeological and Cultural Resources were identified during a reconnaissance of the property.

If any Archeological and/or Cultural Resources are discovered during the management of this property, immediate management practices will be applied.

# GENERAL PROPERTY RECOMMENDATIONS

Forest Protection

A vigorous growing stand is the best defense to an attack from a variety of forest insects, plants and pathogens.

Insects and Diseases

Trees are subject to attack from insects and diseases. Different insects and diseases affect trees according to the age, species, and condition of the trees. Planted stands of pines and pure stands of hardwoods are particularly susceptible to attack. Since there are many different insects and diseases, no attempt will be made here to explain all of them. The property should be inspected at least annually for possible signs of insect and disease activity. Some things to look for are:

- · Unseasonable leaf fall
- Discoloration of leaves or needles
- Pitch pockets on pine trees
- · Heavy defoliation of hardwood leaves
- Groups of three or more dying trees within a stand

This list does not cover all instances of insect or disease attacks. If anything unusual is noticed, report it to a forester. In most cases, insect and disease problems can be controlled if discovered early.

#### Fire Protection

Your forest should be protected from wildfire at all times. The best way to protect your investment is by establishing and maintaining firebreaks around the property. Guidelines

for establishment and maintenance of firebreaks may be found in Mississippi Forestry Commission publication #107, *Mississippi's Best Management Practices*.

#### Grazing

Tree seedlings should be protected from grazing until such time as the terminal bud of the sapling is beyond reach of livestock. Domestic livestock should be denied access to the tree planting area.

#### **Boundary Lines**

It is the responsibility of the landowner to ensure that all property lines and boundaries designating areas to receive forestry work are clearly identified and visible to all contractors.

**Note:** Some forest practices may cause temporary adverse environmental or aesthetic impacts. These practices will only cause short-term adverse impacts where they are installed. Special efforts will be made to minimize adverse effects when carrying out any of the practices. Examples include: site preparation, planting, prescribed fires, firebreak installation and maintenance, road installation and maintenance, pesticide applications and timber harvesting.

# Water Quality Protection

The objective of the landowner is to protect, preserve and enhance all water sources on or transecting the property. This can best be achieved by implementation of Best Management Practices in all aspects of the management of the property.

#### Aesthetics

The goal is to assure that the property is managed in such a way that is aesthetically pleasing to the landowner as well as the community. Activities could include, maintaining buffer strips along the road and adjacent to the home site, planting wildflowers along the road, and trees with attractive fall and spring color along the drive and near the home site.

# Ecological Restoration

Ecological restoration is the process of assisting the recovery of an ecosystem that has be degraded, damaged, or destroyed. A reconnaissance of the property has been conducted and no ecological restoration activities are recommended at this time.

# Wildlife Mgt. Target Species

The objective of this practice is to provide habitat best suited for the featured or target species. Habitat management will focus on providing food, cover, water, and space to facilitate the target species.

#### Environmental Education

Environmental educational goals are to provide educational opportunities for children and adults through the development of items such as nature trails with tree identification markers, wildlife viewing areas, picnic areas, parking, public restroom facilities.

### Wildlife Management General

The goal is to provide a diversity of habitats suited for a variety of game and non-game wildlife species. Habitat management will focus on providing a variety of food, cover, water, and space. This will be accomplished, in part, by establishing and maintaining access roads and firelanes, providing openings within the forest, and leaving mast producing and den trees.

All the Forest Land is leased to two different hunting clubs. Both clubs plant the firelanes and openings in game food for native wildlife.

# Timber Management

Timber management goals for this property are to manage timber resources in such a manner as to maximize timber production throughout the life of the stand.

#### Recreation

According to landowner objectives the recreational use of the property could prove to be an avenue for personal enjoyment or for generating income. An evaluation of your property should be conducted and a plan developed to accomplish your specific goals for recreational activities on your property.

# **SOIL TYPES**

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Generated brief soil descriptions are created for major soil components. The Gullied land is a miscellaneous area. The Loring component makes up 27 percent of the map unit. Slopes are 5 to 20 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

#### 5C3

The Loring component makes up 90 percent of the map unit. Slopes are 5 to 8 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 28 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. Loblolly Site Index = 95.

6E3

The Memphis component makes up 95 percent of the map unit. Slopes are 12 to 40 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

# **STRATA**

Strata 1

Stand Description

This strata consists of the following stands: #6, #9 and #23 for a total of 36.63 acres. The strata consists of hardwood pulpwood and sawtimber that is located in the drainages and is used as a Stream Side Management Zone (SMZ). Most species of oaks, gums, maples and other hardwood species. Also, pine pulpwood and sawtimber is scattered throuhout the strata mainly on the side slpoes of the drainages. These trees were established in 1976. There are approximately 145 trees per acre that have an average diameter of 8 inches. The average total height of the trees is 57 feet with 75 tons per acre.

#### Stand Recommendations

This hardwood stand will be managed on a 65 year rotation. The pines will be harvested when the adjoining pine plantations are thinnied. The strata will be maintained as a Stream Side Management Zone which will enhance the beauty of this section by maintaining the hardwood stands for aesthetics values. Native wildlife use this SMZ for food, nesting, cover and for a travel corridor.

#### **Activity Recommendations**

Harvest

Conduct timber sale to remove all old growth pines leaving a total hardwood stand. This should take place when the adjacent pine stand is thinned in 2015. The hardwood stands will provide cover and acrons for native wildlife.

# Strata 2

### Stand Description

This strata consists of stand #5 for a total of 11.17 acres. The strata consists of pine sawtimber and hardwod trees comprised of oak, gum, hickory, maple and other species that are located in a drainage and is used as a Stream Side Management Zone. These trees have an average age of 35 years that were established in 1976. There are approximately 150 trees per acre that have an average diameter of 12 inches. The average total height of the trees is 52 feet with 55 tons per acre.

#### Stand Recommendations

This loblloly pine stand will be managed on a 35 year rotation using sound forestry management practices. Native wildlife use this plantation for cover, nesting and for food.

#### **Activity Recommendations**

#### Harvest

Conduct a timber sale in 2015 when the adjoining Strata 3 is thinned. Remove all pines in this strata which will allow more sunlight to reach the forest floor which will provide additional food and cover for the native wildlife. The hardwood trees will be left which will result in this being converted to a hardwood stand.

#### Strata 3

# Stand Description

This strata consists of the following stand: #10 for a total of 303.92 acres. This strata is a 18 year old loblolly pine plantation established in January 1993 that is mainly chip-in -saw size timber with an average dimater of approximately 8.4 inches and has approximately 225 trees to the acre. The trees have an average total height of 39 feet with 80 tons per acre. The plantation was first thinned in 2008 and 25 tons of pine pulpwood was removed per acre. A prescribe burn was carried out in the winter of 2010.

#### Stand Recommendations

This loblloly pine strata will be managed on a 35 year rotation using sound forestry management practices. The strata will be thinned to lower the basal area which will allow more sunlight for a period of time to the forest floor resulting in more wildlife food and cover for the deer, turkey and other native wildlife. The Mississippi Forestry Commission will evaluate the stand and when a thin is needed, we will determine the best thinning method to use to achieve an average basal area of 75+/- 10 square feet per acre.

# **Activity Recommendations**

#### Harvest

Stand # 10 for a total of 300.92 acres should be thinned a second time to a basal area of 75 +/- 10 square feet per acre in 2015. By selectively removing some of the pine trees, the remaining trees will be released providing growing room that will allow the stand to reach full potential.

Opening the canopy allows sunlight to reach the forst floor resulting in more herbaceous vegetation providing food and cover for native wildlife.

In 2015, the Mississippi Forestry Commission will make a determination on which trees will need to be harvested for the 2 nd thinning and then advise the BOE on our recommendations.

#### Fire Protection

Prescribed burning is recommended in this strata to reduce fuel loading, the potential for wildfire, and to improve wildlife habitat. A prescribe burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A prescribed burn manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other prescribed burn vendors are available to conduct prescribe burning.

Prescribe burning will be scheduled as follows:

Stand #10 in the fall of 2017

#### Strata 4

# Stand Description

This strata consists of the following stands: # 4, # 11 and # 12 for a total of 223.74 acres. This strata is 22 year old loblolly pine plantation that was established in January 1989 and is mainly chip-n-saw size timber. The trees have an average diameter of 9 inches and there are 220 trees to the acre. The trees have an average total height of 40 feet with 75 tons per acre. The strata was first thinned in 2005 and 22 tons of pine pulpwood was removed per acre. A prescribe burn was carried out in March 2008.

#### Stand Recommendations

This lobloly pine stand will be managed on a 35 year rotation using sound forestry management practices. Native wildlife use this stand for nesting, food and for cover. Opening the canopy allows more sunlight to reach the forest floor resulting in more herbaceous vegetation for the native wildlife.

## **Activity Recommendations**

#### Harvest

Strata 4 for a total of 229.02 acres should be thinned a second time to a basal area of 75 +/- 10 square feet per acre in 2014. By selectively removing some of the pine trees, the remaining trees will be released providing growing room that will allow the stand to reach full potential.

Opening the canopy allows sunlight to reach the forst floor resulting in more herbaceous vegetation providing food and cover for native wildlife.

In 2014, the Mississippi Forestry Commission will make a determination on which trees that will need to be harvested for the 2 nd thinning and then advise the BOE on the best thinning method at that time.

#### Fire Protection

Prescribed burning is recommended in this strata to reduce fuel loading, the potential for wildfire, and to improve wildlife habitat. A prescribe burning plan must be developed and followed in the application of the burn. Because of equipment,

personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A prescribed burn manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other prescribed burn vendors are available to conduct prescribe burning.

Prescribe burning will be scheduled as follows:

Strata 4 in the fall of 2016

#### Strata 5

#### Stand Description

This strata consists of the following stands: #1, #18, #19 and #21 for a total of 41.43 acres that was planted to loblolly pine seedlings in February 2008 at the rate of 691 seedlings per acre. All timber had been harvested during the previous summer and the tract had sprouted back in numerous hardwood sprouts that were competing with the planted pines. The tract was aerial sprayed with prescribed hebicides during the summer of 2008 to help control the hardwood competition. A survival check during late fall of 2008 showed an excellent survival of 665 trees per acre. Native wildlife use the young pine plantaion for nesting, food and cover.

#### Stand Recommendations

This loblloly pine strata will be managed on a 35 year rotation using sound forestry management practices.

This Strata will be inspected annually for any health problems that may arise, including bark infestation. The stands in this strata should be evaluated for the need of a first thin when they reach the age of 14 years old. The trees in this strata should be allowed to self prune until approximately 30% of the tree is live crown. The Mississippi Forestry Commission will determine when the stand is ready to be thinned and the best method thinning method to be used to continue the maximum growth of this plantation.

#### Strata 6

#### Strata Description

This Strata consists of Stand # 3 for a total of 3.39 acres that is a loblolly pine plantation that was established in 1989. There are approximately 350 trees per acre that average 7 inches in diameter. The trees have an average total height of 35 feet with 50 tons per acre. Also there are approximately 70 scattered harwoods of sweet gums, oaks and other species that average 8 inches in diameter and that are approximately 39 feet in total height. This strata is located along and in a drain and will be managed as a Stream Side Management Zone.

#### Stand Recommendations

This loblloly pine stand will be managed on a 35 year rotation using sound forestry managemement practices. This strata was scheduled to be thinned in 2005 when the adjoining Strata 4 was thinned but was not due to steep ground.

Native wildlife such as deer and rabbits, are found nesting in this strata and using it as a traveling corridor between the other stands.

### **Activity Recommendations**

#### Harvest

The loblolly pine stands in this strata should be thinned to a (BA of 75 +/- 10 square feet per acre) in 2014 when Strata 4 is thinned. The Mississippi Forestry Commission will evaluate these stands at that time and make a determination of the best thinning method.

The thinning will allow the remaining trees to reach sawtimber size more quickly and will allow more sunlight to reach the forest floor resulting in more tender vegetation for the native wildlife.

#### Fire Protection

Prescribed burning is recommended in this strata to reduce fuel loading, the potential for wildfire, and to improve wildlife habitat. A prescribe burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A prescribed burn manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other prescribed burn vendors are available to conduct prescribe burning.

Prescribe burning will be scheduled as follows:

Stand #3 in the fall of 2016

### Strata 7

#### Stand Description

This strata consists of stand: #4 for a total of 33.68 acres. The strata consists of hardwood pulpwood and sawtimber of oak, sweetgum maple and other species that is located in the drainages and is used as a Stream Side Management Zone. These trees were established in 1955 and there are approximately 95 trees per acre that have an average diameter of 8 inches. The average total height is 57 feet with 65 tons per acre.

#### Stand Recommendations

This area will be maintained as a Stream Side Management (SMZ) and helps protects the drainages from run off and helps maintain stream temperatures. No activites are planned for the next 10 years. The hardwoods will be managed on a 65 year rotation. Oaks provide acorns for the deer, turkey and squirrels.

# **OTHER PLAN ACTIVITIES**

Boundary Lines

Line Description

The property boundary line is painted around all 4 miles of the section of land in red paint at eye level mainly on hacked marks. and needs to re-painted approximately every 4 years.

#### Line Recommendations

The 4 miles of boundary lines will be repainted with red paint at eye level on the old hacked marks and all corners marked with a X to insure that the property boundaries are clearly identified.

# **Activity Recommendations**

**Property Activities** 

Routine inspections and general maintenance of the roads, firelanes, and boundary lines will ensure overall appearance and aesthetics of the property.

All property lines will be remarked with red paint during the summer of 2013.

# **Property Activities**

Routine inspections and general maintenance of the roads, firelanes, and boundary lines will ensure overall appearance and aesthetics of the property.

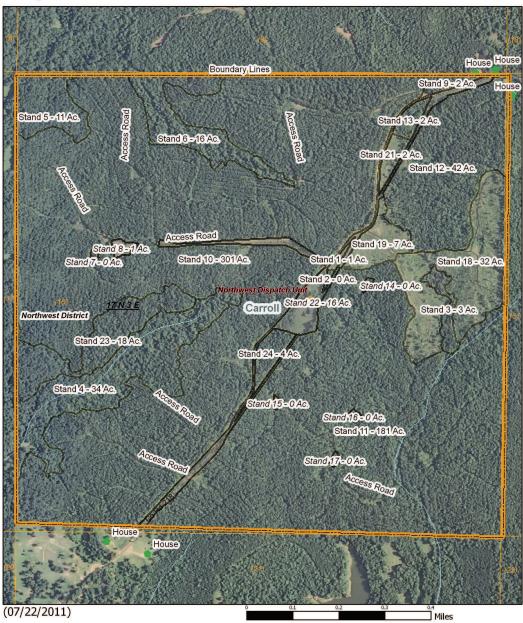
All property lines will be remarked with red paint during the summer of 2018.



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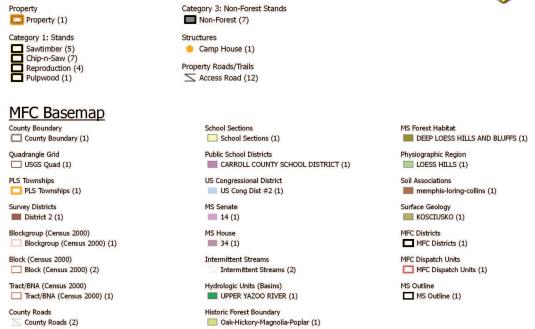
Blackhawk 2012 to 2021 674.14 Acres





# S16-T17N-R3E Carroll County BOE





# Stand Activity Schedule for Carroll County BOE 16 17N 3E

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue				
2014									
4	2	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	0	\$9.80	\$118.04				
4	11	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	181	\$6,319.60	\$76,120.48				
4	12	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	42	\$1,471.05	\$17,719.01				
4	13	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	2	\$70.00	\$843.16				
4	20	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	0	\$1.75	\$21.08				
6	3	Harvest, Mechanical, Thin, Machine, Loblolly		\$105.00	\$696.90				
		Yearly Totals	228	\$7,977.20	\$95.518.67				
2015									
1	6	Harvest, Mechanical, Thin, Machine, Misc Pine	16	\$565.60	\$5,123.04				
1	9	Harvest, Mechanical, Thin, Machine, Misc Pine	2	\$70.00	\$634.04				
1	23	Harvest, Mechanical, Thin, Machine, Loblolly	18	\$630.00	\$10,063.80				
2	5	Harvest, Mechanical, Thin, Machine, Loblolly	11	\$390.95	\$3,541.11				
3	10	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	301	\$10,535.00	\$145,985.00				
Yearly Totals 348 \$12,191.55 \$165,347.00									
2016									
4	2	Fire Protection, Other, Burn, Hand, Fuel Reduction	0	\$7.00	\$0.00				
4	11	Fire Protection, Other, Burn, Hand, Fuel Reduction	181	\$4,514.00	\$0.00				
4	12	Fire Protection, Other, Burn, Hand, Fuel Reduction	42	\$1,050.75	\$0.00				
4	13	Fire Protection, Other, Burn, Hand, Fuel Reduction	2	\$50.00	\$0.00				
4	20	Fire Protection, Other, Burn, Hand, Fuel Reduction	0	\$1.25	\$0.00				

Strata	Stand	Acti	vity	Acre	Est. Cost	Est. Revenue
6	3	Fire Protection, Other, Burn, Hand, Fuel Reduction 3		\$75.00	\$0.00	
			Yearly Totals	228	\$5.698.00	\$0.00
2017						
3	10	Fire Protection, Other, Burn, Hand, Fuel Reduction 301		\$7,525.00	\$0.00	
			Yearly Totals	301	\$7.525.00	\$0.00
			Grand Totals	1,105	\$33,391.75	\$260.865.67